ASSET MANAGEMENT COUNCIL

The Transportation Asset Management Council will expand the practice of asset management statewide to enhance the productivity of investing in Michigan's roads and bridges through coordination and collaboration among state and local transportation agencies by:

1. Surveying and reporting the condition of roads and bridges by functional classification categories for the State and Regional Planning areas.

2. Assessing completed and planned investments in roads and bridges by the various transportation agencies of the state.

3. Supporting the development of appropriate asset management tools and procedures.

4. Providing education and training on the benefits of developing road improvement programs through the use of asset management principles and procedures.

Our expected outcome is an asset management process that is easily used and communicated and leads to a road network that is managed by function.

AMC GOALS

ASSET MANAGEMENT Council

Michigan Department of Transportation
County Road Association of Michigan
Michigan Municipal League
Michigan Association of Regions
Michigan Transportation Planning Association
Michigan Townships Association
Michigan Association of Counties
Center for Geographic Information

Helpful Links:

Federal Highway Administration
Office of Asset Management
http://www.fhwa.dot.gov/infrastructure/asstmgmt/

American Public Works Association
http://www.pubworks.org/

Transportation Asset Management Council
http://www.michigan.gov/mdotamc

For questions or comments contact:
Rick Lilly – By phone at (517) 335–2606
or e-mail lillyr@michigan.gov.

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ASSET MANAGEMENT

Asset Management as defined in Michigan is "an ongoing process of maintaining, upgrading and operating physical assets cost-effectively, based on a continuous physical inventory and condition assessment." [MCL 247.659a(1)(a)]

It provides a solid foundation which allows transportation professionals to monitor the transportation system. Further, it helps them optimize the preservation, improvement and timely replacement of assets through cost-effective management, programming and resource allocation decisions[1].

Asset Management involves collecting physical inventory and managing current conditions based on strategic goals and sound investments. It is a continuous, iterative process enabling managers to evaluate various scenarios, determine trade-offs between different actions, and select the best method for achieving specified goals.

While asset management utilizes the output of pavement and bridge management systems, it is much more than just another management system with a fancy name. The significant difference is, in many respects, pavement and bridge management systems are used in a "tactical" manner, to identify specific projects. Asset Management is a "strategic" approach that looks at the network as whole rather than individual projects.

Traditionally, public sector management of roads and bridges has been tactical in nature, concentrating on the immediate and most severe problems. Asset management shifts that thinking to one that is strategic in nature. Decisions are made with regard to the long-range condition of the entire system. This requires considering various investment strategies which will maintain the assets in good condition.

[1] Asset Management Primer, USDOT/FHWA, Office of Asset Management, December 1999.

It is crucial in an asset management process to have the ability to forecast future road and bridge conditions and to do investment analyses based on various funding scenarios. The strategic component of the decision-making process entails the ability to assess improvements based on desired outcomes. The strategic focus of an asset management process is supported by network level analysis in addition to the tactical focus of performing location-specific, project-level analysis. This task would take into consideration:

- Current condition of the transportation system and its future condition if there is no change in current practices.
- Future condition based on alternative strategies.
- The best time to maintain, preserve, or improve to get maximum useful life from a transportation asset.
- Use preventive fixes or allow an asset to deteriorate to the point of requiring reconstruction.
- Costs and benefits of each decision.
- Relationship to identified goals and objectives.

The key is the conscious effort required to create and analyze alternatives. It is necessary to focus attention on effectively and efficiently managing and operating our transportation system, rather than merely reconstructing it.

In summary, the fundamental elements of an Asset Management process include:

- Conduct periodic system condition inventories.
- Identify needs by forecasting system conditions based upon reliable rates of deterioration.
- Establish strategic goals and objectives, and performance measures.
- Evaluate investment scenarios based upon forecasted conditions and achievement of goals and objectives.
- Develop and implement a multi-year investment program.
- Routinely monitor the performance of system improvements.

A SOUND ASSET MANAGEMENT PROCESS

The Kent County Road Commission follows a six-step planning process that illustrates sound asset management as part of its annual budget cycle.

1. **Survey Conditions**: One-third of the roads within the primary road system are surveyed annually and the database is updated to reflect completed improvement projects.
2. **Determine Current Needs**: A comprehensive list of primary road needs is produced annually using a variety of indicators including PCI, existing and projected traffic volume, and all-season condition.
3. **Select and Package Projects**: Staff from Planning, Engineering, and Maintenance review the needs list and cooperatively identify potential projects for the upcoming five-year period.
4. **Analyze Future Conditions**: Based upon the projects selected in Step 3, future conditions are forecast to determine if system performance objectives are being achieved.
5. **Update Improvement Program**: The Five-Year Improvement Program is updated as part of the process of developing the annual budget.
6. **Monitor Performance**: As projects are implemented, the condition of select segments is surveyed annually to more precisely determine the performance of various improvement strategies.